success will be greatly diminished, and perhaps a new fluid acting more quickly may reduce or prevent altogether the unpleasant, and in some persons sharply painful, sensation produced during blanching. I have not seen or heard of any material interference with the healing process, except in one case where some sloughing occurred; but as the wound had to be opened the next day to stop bleeding, it is at least doubtful to what cause the mischief was due.

"But medicine gains as well as surgery. One case of lumbago, and one of rheumatism of the shoulder, have been instantly relieved by this process; and four cases of neuralgia have been for the present cured. Even whilst writing this, I have applied the spray to the forehead in a case of neuralgic headache, and to the sacral region for a similar pain there, with marked advantage. Hence, without in the least degree claiming for the process the character of a universal panacea for superficial pain, I look with hope to the prospect of wide use in many troublesome disorders which, to cover our ignorance, we call neuralgic; and also in such brain affections, especially in children, where rapid and extreme cold is desired.

"But I will refrain from speculations, and briefly mention a few suggestions which lie on the surface of the question. If the operation is not very superficial, the part should be well frozen, and it should be white for a minute or more before any incision is made. The surgeon should cut slowly, and the spray should be kept going immediately before the knife. He should remember the difference between frozen and normal parts, and work accordingly. And, lastly, if the operation be lengthened, cold water should be used to delay slightly the recovery.

"The more one sees of Dr. Richardson's most important discovery, the more one learns the necessity of attention to such minutiæ as the perfectness of the tubes, the purity of the ether, and the accommodation to differing circumstances; and the more one feels that the invention contains within it the power of a yet larger growth, and that its author deserves the lasting gratitude of the profession and those whose miseries we try to alleviate.

"P. S. Since the above was written, I have had the gratification of seeing the complete success of ether spray in Dr. Greenhalgh's important operation of Cæsarean section. Many other operations have been painlessly done, and I have used it with marked success in a case of spinal hyperæsthesia, and one of lumbago. On the other hand, some failures are said to have happened, some of which have been clearly attributable to the imperfection of the apparatus employed, and others, it may be, to the unfitness of the cases for the use of narcotism by cold. Widely applicable as this mode of producing painlessness is, it needs, as usual, two conditions for its success: a perfectness of the mechanism employed and a fit selection of cases."

6. *Antagonism of Chloroform and Ether.*—Dr. GREENHALGH stated at the meeting of the Obstetrical Society of London (Feb. 7, 1866), that some time since he had requested Dr. Sansom to administer chloroform to a lady during the removal of a large polypus from the uterus. She was extremely anæmic and feeble, from large and frequent losses of blood occurring over a period of two years and a half. She had a damaged heart, and a profuse sanious and offensive discharge from the vagina. Shortly after the administration of the chloroform, and before complete anæsthesia was induced, her pulse began to falter, her breathing became embarrassed, and her countenance livid. Dr. Sansom, without delaying the inhalation, substituted ether with the best results. Dr. Greenhalgh begged to ask that gentleman if he had adopted a similar practice in other cases with good effects; and if so, whether he considered that the vapour of ether could be regarded as an antidote to the evil consequences of chloroform, and whether he could offer any physiological explanation of how such beneficial effects are brought about.

Dr. Sansom replied that it was his constant practice to administer ether if in any case chloroform seemed to produce a depressing effect. Indeed usually, in prolonged operations, he thus maintained the anæsthesia. The substitution, or rather addition, was never attended by any return of sensation. He always found that the plan answered admirably: it certainly restored the force of the circulation. It was perhaps premature to explain the *rationale* of the procedure; but he would remark on the singular circumstance that whereas chloroform tended to empty the blood-corpuscles, ether tended to distend them—chloroform reddened the blood, and ether darkened it. There thus existed, as it were, a natural antagonism amongst agents of the anæsthetic class. Again, they influenced differently the sympathetic system. Ether would cause contraction of the heart and arteries even during the period of the influence of chloroform, and the bichloride of carbon did the same in a marked degree.—*Med. Times and Gaz.*, March 24, 1866.

7. *Anæsthetic Properties of the Bichloride of Carbon.*—Dr. SANSOM, in a paper read before the Obstetrical Society of London (Feb. 7, 1866), expressed the opinion that this new anæsthetic would be of great value to the practitioners of obstetrics. Very much as to its constitution and properties had yet to be determined, and more could not be attempted at present than the presenting to the Society a few scattered hints and observations. Dr. Sansom claimed to be the first to describe this body as an anæsthetic in his book on Chloroform, published in May, 1865. It was then called tetrachloride of carbon; it has since been determined to be a bichloride, and Sir James Simpson has suggested for it the convenient term chlorocarbon. The fluid possesses many of the characteristics of chloroform; its odour, however, is more pleasant and less pungent; its density is slightly greater, and its volatility less. It takes a longer time to induce anæsthesia. On the fourth of July, 1864, the author, in conjunction with Dr. John Harley, tried the effect of the inhalation of the new anæsthetic upon a frog. The circulation in the web of the foot was observed by the microscope throughout the process. It was seen to cause a considerable amount of irregular muscular action, and a very decided contraction of the capillary arteries. A state of torpor was then induced for three-quarters of an hour, but reflex action was not wholly abolished. Experiments were made upon dogs and guinea-pigs. In these there was considerable muscular agitation at the outset. Deep anæsthesia was slowly produced, but, once induced, continued very profound until death. The post-mortem signs were, complete collapse of the lungs and distension of the right side of the heart, so that the organ assumed a globular form. The sensations produced by the inhalation of the bichloride of carbon are at first very agreeable: there is a pleasant sensation of warmth, and, as the author thought, a freedom from the vertigo such as is produced by chloroform. Dr. Sansom has employed it in cases of midwifery. It was readily inhaled: it mitigated the pains, and in one case almost completely abolished them; it did not interfere with consciousness. In reviewing the relative merits of the two anæsthics, the author considered (1) that chlorocarbon has the advantage over chloroform in its being inhaled with greater comfort; it is not susceptible of decomposition with the formation of deleterious chlorine compounds; and its cost will probably be considerably less. Being much less volatile, than chloroform, it will probably be best administered by pouring it upon a sponge wrung out in hot water. (2) It is, during its early stage of action, a powerful stimulant to the circulatory system. It will probably be especially valuable in midwifery, for it abolishes pain without affecting consciousness, and its tendency is certainly to increase muscular action. (3) It is not advisible to induce deep narcotism by means of this agent. Its profound effects are very persistent, and it is eliminated from the system slowly.—*Med. Times and Gaz.*, March 24th, 1866.

8. *Hæmostatic Ethers.*—Dr. B. W. RICHARDSON has invented some hæmostatic ethers which may prove very useful in practice. By the ether spray he was struck with the effect of the cold in immediately stopping the flow of the blood, but he observed that when reaction returns the bleeding recurs, which, if the wound be closed too quickly, will be the cause of after trouble; hence he was led to believe that if the effects of the cold could be supplemented by a styptic which would spray evenly with ether the constringing action would be rendered more perfect. With this view, he requested Mr. Robins to make for him a solution consisting of absolute ether, having a boiling point of 92°